LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

IWM Consulting Group
7428 Rockville Road
Indianapolis, IN 46214
ATTN: Brad Gentry

August 6, 2018

SUBJECT: REVISED Former Amphenol Facility, Data Validation

Dear Mr. Gentry,

Enclosed is the final validation report, including a revision, for the fraction listed below:

- Reason for revision: 1,2-Dichloroethane and Vinyl chloride were validated from the SIM analysis.

This SDG was received on August 1, 2018. Attachment 1 is a summary of the samples that were reviewed for analysis.

LDC Project #42788:

SDG #	Fraction:
10441103	Volatiles

The data validation was performed under Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Ambient Air Investigation Work Plan, Franklin Power Products/Amphenol Corporation, Franklin, Indiana; July 2018
- USEPA National Functional Guidelines for Organic Superfund Methods Data Review; January 2017

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist

938 pages-DL RUSH (DUE 08/03/18) Attachment 1

90/10 **LDC #42788 (IWM Consulting Group - Indianapolis, IN / Former Amphenol Facility)**

LDC	SDG#	DATE REC'D	(3) DATE DUE	(9) VOA (TO-15)		(3) (TO-15)		TCE (TO-15 SIM)																													
Matrix:	Air/Water/Soil			A	S	A	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	10441103	08/01/18	08/03/18	0	0	6	0	5	0																												
A	10441103	08/01/18	08/03/18	1	0	0	0	1	0																												
Total	T/PG			1	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13

Shaded cells indicate Level IV validation (all other cells are Level III validation). These counts do not include MS, MSD, Dups.

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LDC Report# 42788A48_RV1

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Former Amphenol Facility

LDC Report Date: August 6, 2018

Parameters: Volatiles

Validation Level: Level III & IV

Laboratory: Pace Analytical Services, LLC.

Sample Delivery Group (SDG): 10441103

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AS Effluent #1 (980 Hurricane)**	10441103001**	Air	07/26/18
AA-1 North #1 (980 Hurricane)	10441103003	Air	07/26/18
AA-2 East #1 (980 Hurricane)#	10441103005#	Air	07/26/18
AA-3 South #1 (980 Hurricane)	10441103007	Air	07/26/18
AA-4 West #1 (980 Hurricane)	10441103009	Air	07/26/18
AA-5 West #2 (980 Hurricane)	10441103011	Air	07/26/18
AA Duplicate (980 Hurricane)	10441103013	Air	07/26/18
AA-4 West #1 (980 Hurricane)DUP	10441103009DUP	Air	07/26/18

**Indicates sample underwent Level IV validation for full scan
**[1] Indicates sample underwent Level IV validation for SIM

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Ambient Air Investigation Work Plan, Franklin Power Products/Amphenol Corporation, Franklin, Indiana (July 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15 and EPA Method TO-15 in Selected Ion Monitoring (SIM) mode

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level IV data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound for analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled with the following exceptions:

Sample	Final canister pressure (Field)	Final canister pressure (Laboratory)
AA-3 South #1 (980 Hurricane)	-11 "Hg	-3.5 "Hg

Although there was a discrepancy between the field and laboratory measurements of the final canister pressure, using professional judgment, associated results were not qualified. The laboratory indicated that upon testing, the sampling gauge was confirmed to be faulty, thus providing inaccurate final vacuum in the field.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 24 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 30.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 40.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

Canister blank analyses were performed for every sample canister. No contaminants were found in the canister blanks with the following exceptions:

Blank ID	Analysis Date	Compound	Concentration	Associated Samples
AA-2 East #1 Cert #1265	07/05/18	Trichloroethene	0.48 ug/m^3	AA-2 East #1 (980 Hurricane)

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
AA-2 East #1 (980 Hurricane)	Trichloroethene	0.20 ug/m^3	0.20U ug/m^3

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not required by the method.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples AA-2 East #1 (980 Hurricane)**[1] and AA Duplicate (980 Hurricane) were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound (Method)	Concentration (ug/m^3)		RPD
	AA-2 East #1 (980 Hurricane)**[1]	AA Duplicate (980 Hurricane)	
Trichloroethene (TO15-SIM)	0.20	0.16	22

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria for samples which underwent Level IV validation. Raw data were not reviewed for Level III validation.

XIII. Target Compound Identifications

All target compound identifications met validation criteria for samples which underwent Level IV validation. Raw data were not reviewed for Level III validation.

XIV. System Performance

The system performance was acceptable for samples which underwent Level IV validation. Raw data were not reviewed for Level III validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to canister blank contamination, data were qualified as not detected in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Based upon the data validation all other results are considered valid and usable for all purposes.

Former Amphenol Facility
Volatiles - Data Qualification Summary - SDG 10441103

No Sample Data Qualified in this SDG

Former Amphenol Facility
Volatiles - Laboratory Blank Data Qualification Summary - SDG 10441103

Sample	Compound	Modified Final Concentration	A or P
AA-2 East #1 (980 Hurricane)**	Trichloroethene	0.20U ug/m^3	A

Former Amphenol Facility
Volatiles - Field Blank Data Qualification Summary - SDG 10441103

No Sample Data Qualified in this SDG

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AS Effluent #1 (980 Hurricane) **Lab ID: 10441103001** Collected: 07/26/18 17:25 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	**39.2**	ug/m3	1.3	1.52		07/27/18 19:16	75-34-3	
1,2-Dichloroethane	**17.9**	ug/m3	0.62	1.52		07/27/18 19:16	107-06-2	
cis-1,2-Dichloroethene	**411**	ug/m3	36.8	45.6		07/29/18 15:37	156-59-2	
trans-1,2-Dichloroethene	**3.1**	ug/m3	1.2	1.52		07/27/18 19:16	156-60-5	
Methylene Chloride	ND	ug/m3	5.4	1.52		07/27/18 19:16	75-09-2	
Tetrachloroethene	**1950**	ug/m3	31.4	45.6		07/29/18 15:37	127-18-4	
1,1,1-Trichloroethane	**285**	ug/m3	50.6	45.6		07/29/18 15:37	71-55-6	
Vinyl chloride	**12.1**	ug/m3	0.40	1.52		07/27/18 19:16	75-01-4	
TO15 MSV AIR ~~SIM~~ SCAN 8 080618	Analytical Method: TO-15							
Trichloroethene	**665**	ug/m3	2.5	45.6		07/29/18 15:37	79-01-6	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-1 North #1 (980 Hurricane) **Lab ID: 10441103003** Collected: 07/26/18 17:39 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 15:13	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:13	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 15:13	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 15:13	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 15:13	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 15:13	107-06-2	
Trichloroethene	ND	ug/m3	0.085	1.55		07/27/18 15:13	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 15:13	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-2 East #1 (980 Hurricane) **Lab ID: 10441103005** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 15:48	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:48	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 15:48	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 15:48	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 15:48	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 15:48	107-06-2	
Trichloroethene	**0.20** U	ug/m3	0.085	1.55		07/27/18 15:48	79-01-6	1M
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 15:48	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-3 South #1 (980 Hurricane) **Lab ID: 10441103007** Collected: 07/26/18 17:37 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.52		07/27/18 16:23	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.52		07/27/18 16:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.52		07/27/18 16:23	156-60-5	
Methylene Chloride	ND	ug/m3	5.4	1.52		07/27/18 16:23	75-09-2	
Tetrachloroethene	ND	ug/m3	1.0	1.52		07/27/18 16:23	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.52		07/27/18 16:23	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.062	1.52		07/27/18 16:23	107-06-2	
Trichloroethene	ND	ug/m3	0.083	1.52		07/27/18 16:23	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.52		07/27/18 16:23	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-4 West #1 (980 Hurricane) **Lab ID: 10441103009** Collected: 07/26/18 17:05 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.58		07/27/18 16:57	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 16:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 16:57	156-60-5	
Methylene Chloride	ND	ug/m3	5.6	1.58		07/27/18 16:57	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.58		07/27/18 16:57	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.8	1.58		07/27/18 16:57	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.065	1.58		07/27/18 16:57	107-06-2	
Trichloroethene	**0.087**	ug/m3	0.086	1.58		07/27/18 16:57	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		07/27/18 16:57	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-5 West #2 (980 Hurricane) **Lab ID: 10441103011** Collected: 07/26/18 17:16 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.58		07/27/18 18:07	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 18:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 18:07	156-60-5	
Methylene Chloride	ND	ug/m3	5.6	1.58		07/27/18 18:07	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.58		07/27/18 18:07	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.8	1.58		07/27/18 18:07	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.065	1.58		07/27/18 18:07	107-06-2	
Trichloroethene	**0.43**	ug/m3	0.086	1.58		07/27/18 18:07	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		07/27/18 18:07	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA Duplicate (980 Hurricane) **Lab ID: 10441103013** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 18:41	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 18:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 18:41	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 18:41	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 18:41	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 18:41	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 18:41	107-06-2	
Trichloroethene	**0.16**	ug/m3	0.085	1.55		07/27/18 18:41	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 18:41	75-01-4	

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REPORT OF LABORATORY ANALYSIS

LDC #: 42788A48 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/1/18
SDG #: 10441103 Level III/IV Page: 1 of 1
Laboratory: Pace Analytical Services, LLC Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA Method TO-15) / TO-15 SIM

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	SW/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD, r² ICV ≤ 40
IV.	Continuing calibration	A	D ≤ 30
V.	Laboratory Blanks/Canister Blanks per Sample	A/SW	
VI.	Field blanks	N	
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates / DUP	N/A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D = 3 + 7
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Not reviewed for Level III validation.
XIII.	Target compound identification	A	Not reviewed for Level III validation.
XIV.	System performance	A	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

** Indicates sample underwent Level IV validation

	Client ID	Lab ID	Matrix	Date
1	AS Effluent #1 (980 Hurricane)** All full scan	10441103001**	Air	07/26/18
2	AA-1 North #1 (980 Hurricane) *	10441103003	Air	07/26/18
3	AA-2 East #1 (980 Hurricane) *	10441103005	Air	07/26/18
4	AA-3 South #1 (980 Hurricane) *	10441103007	Air	07/26/18
5	AA-4 West #1 (980 Hurricane) *	10441103009	Air	07/26/18
6	AA-5 West #2 (980 Hurricane) *	10441103011	Air	07/26/18
7	AA Duplicate (980 Hurricane) *	10441103013	Air	07/26/18
8	AA-4 West #1 (980 Hurricane)DUP *	10441103009DUP	Air	07/26/18
9				
10				

Notes: 1, L, RRR, PPP, E, AA, N, C - full scan & S - SIM except #1

	300706MB						
	300596MB SIM						

* 1, RRR, PPP, E, AA, N - full scan & L, S, C

LDC #: 42788A48

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: V
2nd Reviewer: 9

Method: Volatiles (EPA Method TO-15/TO-15 SIM)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was canister pressure criteria met?	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 24 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30%?	✓			
IIIb. Initial calibration verification				
Was an initial calibration verification standard analyzed after every ICAL for each instrument?	✓			
Were all percent differences (%D) ≤ 40%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 24 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 30% or percent recoveries (%R) 70-130%?	✓			
V. Laboratory Blanks/Canister Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 24 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
Was a canister blank analyzed for every canister?	✓			
Was there contamination in the canister blanks? If yes, please see the Canister Blanks validation completeness worksheet.	✓			
VI. Field Blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes (Optional)				
Were all surrogate percent recoveries (%R) within QC limits?			✓	
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VIII. Laboratory Duplicate				
Was a laboratory duplicate analyzed for this SDG?	✓			
Were the relative percent differences (RPD) within the QC limits?	✓			

LDC #: 42788A48

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: A
2nd Reviewer: Q

Validation Area	Yes	No	NA	Findings/Comments
IX. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?	✓			
Were target compounds detected in the field duplicates?	✓			
XI. Internal standards				
Were internal standard area counts within ± 40% from the associated calibration standard?	✓			
Were retention times within ± 20.0 seconds from the associated calibration standard?	✓			
XII. Compound quantitation				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene	BB. 1,1,2,2-Tetrachloroethane	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane	CC. Toluene	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform	EE. Ethylbenzene	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. Iodomethane
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.1,1-Difluoroethane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

LDC #: 42782A8

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: M
2nd Reviewer: 4

All circled dates have exceeded the technical holding times.

METHOD : GC/MS VOA (EPA Method TO-15)

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
4	Final pressure: -11" Hg in the field						text
	-3.5" Hg at the lab						
	the lab indicated that upon testing, it						
	was confirmed that the sampling gauge						
	used in the field was faulty, thus						
	providing inaccurate final vacuum						

TECHNICAL HOLDING TIME CRITERIA

Canister: 30 days
Tedlar Bag: 72 hours

LDC #: 42788A48

VALIDATION FINDINGS WORKSHEET
Canister Check Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was there contamination in the canister blanks? If yes, please see the qualifications below.

Blank analysis date: 7/5/18
Conc. units: ug/m3 Associated Samples: 3

Compound	Canister ID	Sample Identification								
AA-2 East #1	Can# 1265*		3 **							
S	0.48		0.20							

* full scan text
** SIM

Blank analysis date:_______
Conc. units:_______ Associated Samples:_______

Compound	Canister ID	Sample Identification								

Blank analysis date:_______
Conc. units:_______ Associated Samples:_______

Compound	Canister ID	Sample Identification								

LDC #: 42788A46

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: SR
2nd reviewer: A

METHOD: GC/MS VOA (EPA Method TO-15) /SM

(Y) N N/A Were field duplicate pairs identified in this SDG?
(Y) N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ng/m3)		RPD	Qualification
	3	7		
S	0.20	0.16	22	

Compound	Concentration ( )		RPD	Qualification

Compound	Concentration ( )		RPD	Qualification

LDC #: 42788A48

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA Method TO-15)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (1.0 std)	Recalculated RRF (1.0 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	ICAL		C (1st internal standard)	0.31515	0.31515	0.28040	0.28040	13.92455	13.92484
			AA (2nd internal standard)	0.65988	0.65988	0.61005	0.61005	8.94723	8.94729
			(3rd internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC#: 42788A48

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: X
2nd Reviewer:

Method:GC/MS VOA (EPA Method TO-15 SIM)

Calibration Date	GCMS	Compound	Standard	(X) Response ratio	(Y) Concentration ratio
7/25/2018	10AIRB	Trichloroethene	1	0.00022	0.001
			2	0.00036	0.001
			3	0.00074	0.002
			4	0.00179	0.01
			5	0.00362	0.01
			6	0.00711	0.02
			7	0.01055	0.03

Regression Output	***Calculated***	***Reported***
Constant	*0.00004*	*0.00004*
R Squared	*0.9999129*	*0.99991*
X Coefficient(s)	*0.3515*	*0.3515*
Correlation Coefficient	*0.9999564*	
Coefficient of Determination (r^2)	*0.9999129*	*0.99991*

LDC #: 42788A48

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: M
2nd Reviewer: Q

METHOD: GC/MS VOA (EPA TO-15)/SIM

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	20804	7/27/18	C (1st internal standard)	0.28040	0.27731	0.27731	1.10285	1.10361
			AA (2nd internal standard)	0.61005	0.65961	0.65961	8.12436	8.12392
			(3rd internal standard)					
2	20802	7/27/18	S (1st internal standard)	0.10000	0.10394	0.10404	3.93759	4.03654
	SIM		(2nd internal standard)					
			(3rd internal standard)					
3	21005	7/29/18	C (1st internal standard)	0.28040	0.29206	0.29206	4.15962	4.15882
			AA (2nd internal standard)	0.61005	0.69331	0.69331	13.64883	13.64837
			(3rd internal standard)					
4			(1st internal standard)					
			(2nd internal standard)					
			(3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 42788A48

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer:
2nd reviewer:

METHOD: GC/MS VOA (EPA Method TO-15)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$ $\frac{(MW)}{STP} = 24.45$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 1, 1:

Conc. = $\frac{(102146)(10)(1.52)(98.97)}{(310700)(0.524)(24.45)(\quad)}$

= 38.6 ug/m3

#	Sample ID	Compound	Reported Concentration (ug/m3)	Calculated Concentration (ug/m3)	Qualification
	1	1	39.2	38.6	-
		S*	665	655	-
	3	S	0.20	0.20	-

* not SIM

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QUALITY CONTROL DATA

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

QC Batch: 553217 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR SIM SCAN
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

METHOD BLANK: 3005496 Matrix: Air
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/m3	ND	0.041	07/27/18 11:24	
Trichloroethene	ug/m3	ND	0.055	07/27/18 11:24	
Vinyl chloride	ug/m3	ND	0.026	07/27/18 11:24	

LABORATORY CONTROL SAMPLE: 3005497

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/m3	.41	0.38	92	61-130	
Trichloroethene	ug/m3	.55	0.57	104	58-141	
Vinyl chloride	ug/m3	.26	0.26	99	61-136	

SAMPLE DUPLICATE: 3006156

Parameter	Units	10441103009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	0.087	.085J		25	
Vinyl chloride	ug/m3	ND	ND		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

QC Batch: 553217 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR SIM SCAN
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

METHOD BLANK: 3005496 Matrix: Air
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/m3	ND	0.041	07/27/18 11:24	0.005
Trichloroethene	ug/m3	ND	0.055	07/27/18 11:24	
Vinyl chloride	ug/m3	ND	0.026	07/27/18 11:24	0.005

0.02 x2
0.027 x2
0.01 x2

LABORATORY CONTROL SAMPLE: 3005497

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/m3	.41	0.38	92	61-130	
Trichloroethene	ug/m3	.55	0.57	104	58-141	
Vinyl chloride	ug/m3	.26	0.26	99	61-136	

SAMPLE DUPLICATE: 3006156

Parameter	Units	10441103009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	0.087	.085J		25	
Vinyl chloride	ug/m3	ND	ND		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AS Effluent #1 Cert# 2064 **Lab ID: 10441103002** Collected: 07/26/18 17:25 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/16/18 14:39	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1	0.15	07/16/18 14:39	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/16/18 14:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/16/18 14:39	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/16/18 14:39	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/16/18 14:39	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1	0.268	07/16/18 14:39	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/16/18 14:39	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1	0.124	07/16/18 14:39	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-1 North #1 Cert# 0944 **Lab ID: 10441103004** Collected: 07/26/18 17:39 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		06/15/18 10:22	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		06/15/18 10:22	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/15/18 10:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/15/18 10:22	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		06/15/18 10:22	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		06/15/18 10:22	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		06/15/18 10:22	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		06/15/18 10:22	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		06/15/18 10:22	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-2 East #1 Cert# 1265 **Lab ID: 10441103006** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/05/18 13:26	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/05/18 13:26	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/05/18 13:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/05/18 13:26	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/05/18 13:26	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/05/18 13:26	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/05/18 13:26	71-55-6	
Trichloroethene	**0.48J**	ug/m3	0.55	1		07/05/18 13:26	79-01-6	2M
Vinyl chloride	ND	ug/m3	0.26	1		07/05/18 13:26	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-3 South #1 Cert# 2750 **Lab ID: 10441103008** Collected: 07/26/18 17:37 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/18/18 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/18/18 14:59	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:59	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/18/18 14:59	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/18/18 14:59	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/18/18 14:59	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/18/18 14:59	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/18/18 14:59	75-01-4	3M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-4 West #1 Cert# 0603 **Lab ID: 10441103010** Collected: 07/26/18 17:05 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		06/23/18 13:24	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		06/23/18 13:24	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/23/18 13:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/23/18 13:24	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		06/23/18 13:24	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		06/23/18 13:24	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		06/23/18 13:24	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		06/23/18 13:24	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		06/23/18 13:24	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-5 West #2 Cert# 2700 **Lab ID: 10441103012** Collected: 07/26/18 17:16 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/20/18 10:11	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/20/18 10:11	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/20/18 10:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/20/18 10:11	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/20/18 10:11	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/20/18 10:11	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/20/18 10:11	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/20/18 10:11	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/20/18 10:11	75-01-4	3M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA Duplicate Cert# 0856 **Lab ID: 10441103014** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/18/18 14:28	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/18/18 14:28	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:28	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/18/18 14:28	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/18/18 14:28	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/18/18 14:28	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/18/18 14:28	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/18/18 14:28	75-01-4	3M

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QUALIFIERS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

SAMPLE QUALIFIERS

Sample: 10441103003

[1] Results confirmed by second analysis.

Sample: 10441103007

[1] Field measurement according to sampling gauge showed final pressure of -11 inHg. Laboratory return pressure indicated a final canister pressure of -3.5 inHg. Upon laboratory testing, sampling gauge confirmed to be faulty, providing innacurate final vacuum in the field. The laboratory measurement indicates linear sample collection.

ANALYTE QUALIFIERS

1M	Detection of this analyte in the associated canister certification exceeded the MDL of 0.268 ug/m3. Result potentially bias high.
2M	The analyte was detected at or above the Method Detection Limit of 0.268 ug/m3 but below the Reporting Limit of 0.546 ug/m3. Any detection in associated samples may indicate a high bias.
3M	The analyte was not detected at or above the Method Detection Limit of 0.126 ug/m3. Any detection in associated samples below this value may indicate a high bias.
4M	The analyte was not detected at or above the Method Detection Limit of 0.15 ug/m3. Any detection in associated samples below this value may indicate a high bias.
5M	The analyte was not detected at or above the Method Detection Limit of 0.268 ug/m3. Any detection in associated samples below this value may indicate a high bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10441103001	AS Effluent #1 (980 Hurricane)	TO-15	553458		
10441103003	AA-1 North #1 (980 Hurricane)	TO-15	553458		
10441103005	AA-2 East #1 (980 Hurricane)	TO-15	553458		
10441103007	AA-3 South #1 (980 Hurricane)	TO-15	553458		
10441103009	AA-4 West #1 (980 Hurricane)	TO-15	553458		
10441103011	AA-5 West #2 (980 Hurricane)	TO-15	553458		
10441103013	AA Duplicate (980 Hurricane)	TO-15	553458		
10441103002	AS Effluent #1 Cert# 2064	TO-15	553191		
10441103004	AA-1 North #1 Cert# 0944	TO-15	553191		
10441103006	AA-2 East #1 Cert# 1265	TO-15	553191		
10441103008	AA-3 South #1 Cert# 2750	TO-15	553191		
10441103010	AA-4 West #1 Cert# 0603	TO-15	553191		
10441103012	AA-5 West #2 Cert# 2700	TO-15	553191		
10441103014	AA Duplicate Cert# 0856	TO-15	553191		
10441103001	AS Effluent #1 (980 Hurricane)	TO-15	553217		
10441103003	AA-1 North #1 (980 Hurricane)	TO-15	553217		
10441103005	AA-2 East #1 (980 Hurricane)	TO-15	553217		
10441103007	AA-3 South #1 (980 Hurricane)	TO-15	553217		
10441103009	AA-4 West #1 (980 Hurricane)	TO-15	553217		
10441103011	AA-5 West #2 (980 Hurricane)	TO-15	553217		
10441103013	AA Duplicate (980 Hurricane)	TO-15	553217		

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AIR: CHAIN-OF-CUSTODY

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO#: 10441103

10441103

27829

Page: 1 of 1

Section A Required Client Information:
Company: IWM Consulting
Address: 7428 Rockville Rd
Indpls, IN 46214
Email To: bsentry@iwmconsult.com
Phone: 317 347 1111 Fax:
Requested Due Date/TAT: 24-HR

Section B Required Project Information:
Report To: B. Gentry
Copy To: Chris Newell
Greg Scarpone
Purchase Order No.:
Project Name: Former Amphenol Facility
Project Number:

Section C Invoice Information:
Attention: SAME
Company Name:
Address:
Pace Quote Reference: Amphenol
Pace Project Manager/Sales Rep.: Carolynne Trout / Marian Hensley
Pace Profile #:

Program: UST Superfund Emissions Clean Air Act Voluntary Clean Up Dry Clean RCRA Other ✓
Location of Sampling by State: IN
Reporting Units: ug/m³ ✓ mg/m³ PPBV PPMV Other
Report Level: II. III. IV. ✓ Other

Valid Media Codes: Tedlar Bag TB; 1 Liter Summa Can 1LC; 6 Liter Summa Can 6LC; Low Volume Puff LVP; High Volume Puff HVP; Other PM10

ITEM #	'Section D Required Client Information AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START END/GRAB DATE	TIME	COMPOSITE - DATE	TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C- Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	As Effluent #1 (980 Hurricane)	6LC	–	7/26/18	0937	7/26/18	17:25	-29"	-3"	20640372									X		001,002
2	AA-1 North #1 (980 Hurricane)	6LC	–	7/26/18	0943	7/26/18	15:39	-30"	-3"	09441794									X		003,004
3	AA-2 East #1 (980 Hurricane)	6LC	–	7/26/18	09:40	7/26/18	16:31	-30"	-3"	12650145									X		005,006
4	AA-3 South #1 (980 Hurricane)	6LC	–	7/26/18	0937	7/26/18	17:37	-30"	-11"	27501033									X		007,008
5	AA-4 West #1 (980 Hurricane)	6LC	–	7/26/18	0938	7/26/18	17:05	-29"	-25"	06030115									X		009,010
6	AA-5 West #2 (980 Hurricane)	6LC	–	7/26/18	0946	7/26/18	17:16	-30"	-3"	27001275									X		011,012
7	AA Duplicate (980 Hurricane)	6LC	–	7/26/18	09:40	7/26/18	16:31	-30"	-3"	08560145									X		013,014
8																					
9																					
10																					
11																					
12																					

Comments:
① Short list includes:
Vinyl Chloride
Trans 1,2 DCE
cis 1,2 DCE
1,2 DCA
methylene chloride
1,1,1 TCA
TCE
PCE
② Run TCE via TO-15 SIM
③ Verify + record all pressures of canisters upon receipt at the lab.
ORIGINAL

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Brad Gentry / IWM	7/26/18	18:15	ERA Pace	7/27/18	930

SAMPLE CONDITIONS

✓	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Brad Gentry / Chris Newell
SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 07/26/18

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 02May2018 Page 1 of 1
	Document No.: F-MN-A-106-rev.15	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: IWM

Project #: **WO#: 10441103**

PM: CT1 **Due Date: 07/30/18**

CLIENT: IWM CONSULT

Courier: [X] Fed Ex [ ] UPS [ ] Speedee [ ] Client [ ] Commercial [ ] Pace [ ] Other:

Tracking Number: 7475 9834 1075, 1053, 1064

Custody Seal on Cooler/Box Present? [ ] Yes [X] No **Seals Intact?** [ ] Yes [X] No

Optional: Proj. Due Date: Proj. Name:

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [X] Foam [ ] None [ ] Tin Can [ ] Other: **Temp Blank rec:** [ ] Yes [X] No

Temp. (TO17 and TO13 samples only) (°C): — **Corrected Temp (°C):** — **Thermom. Used:** [ ] G87A9170600254 [X] G87A9158100842

Temp should be above freezing to 6°C **Correction Factor:** — **Date & Initials of Person Examining Contents:** RS 7/27/18

Type of ice Received [ ] Blue [ ] Wet [X] None

			Comments:
Chain of Custody Present?	[X] Yes	[ ] No	1.
Chain of Custody Filled Out?	[X] Yes	[ ] No	2.
Chain of Custody Relinquished?	[X] Yes	[ ] No	3.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No [ ] N/A	4.
Samples Arrived within Hold Time?	[X] Yes	[ ] No	5.
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No	6.
Rush Turn Around Time Requested?	[X] Yes	[ ] No	7. 24 hr.
Sufficient Volume?	[X] Yes	[ ] No	8.
Correct Containers Used?	[X] Yes	[ ] No	9.
-Pace Containers Used?	[X] Yes	[ ] No	
Containers Intact?	[X] Yes	[ ] No	10.
Media: (Air Can) Airbag Filter TDT Passive			11. Individually Certified Cans (Y) N (list which samples)
Is sufficient information available to reconcile samples to the COC?	[X] Yes	[ ] No	12.

Samples Received: 8 Cans FFPT Pressure Gauge # 10AIR26

	Canisters					Canisters			
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
EFF			-3.5	+5	UnuSed	3288	0922	-30	—
AA-1			-4	"					
" 2			-4	"					
" 3			-3.5	"					
" 4			-4.5	"					
" 5			-4.5	"					
Dup			-4	"					
Unused	2103	1792	-28	—					

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: Brad Gentry Date/Time: 7/27/18 email

Comments/Resolution: include 1,1,DCA in the compound list

Brad was notified that can 2750/fc1033 was received at -3.5 vacuum when measured on lab equipment , as noted above. The gauge appeared to be malfunctioning in field.

Project Manager Review: Carolyne Trust **Date:** 7/27/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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AIR: CHAIN-OF-CUSTODY

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO#: 10441103

10441103

27829

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: IWM Consulting	Report To: B. Gentry	Attention: SAME
Address: 7428 Rockville Rd	Copy To: Chris Newell	Company Name:
Indpls, IN 46214	Greg Scarpone	Address:
Email To: bsentry@iwmconsult.com	Purchase Order No.:	Pace Quote Reference: Amphenol
Phone: 317 347 1111 Fax:	Project Name: Former Amphenol Facility	Pace Project Manager/Sales Rep.: Carolynne Trout/marian Hensley
Requested Due Date/TAT: 24-HR	Project Number:	Pace Profile #:

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☑ Other

Location of Sampling by State: IN

Reporting Units: ug/m³ ☑ mg/m³ ☐ PPBV ☐ PPMV ☐ Other

Report Level: II ☐ III ☐ IV ☑ Other

Valid Media Codes: Tedlar Bag TB; 1 Liter Summa Can 1LC; 6 Liter Summa Can 6LC; Low Volume Puff LVP; High Volume Puff HVP; Other PM10

ITEM #	'Section D Required Client Information AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C-Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	As Effluent #1 (980 Hurricane)	6LC	–	7/26/18	0937	7/26/18	17:25	-29"	-3"	20644	03720								X		001,002
2	AA-1 North #1 (980 Hurricane)	6LC	–	7/26/18	0943	7/26/18	15:39	-30"	-3"	09441	79940								X		003,004
3	AA-2 East #1 (980 Hurricane)	6LC	–	7/26/18	09:40	7/26/18	16:31	-30"	-3"	12650	14501								X		005,006
4	AA-3 South #1 (980 Hurricane)	6LC	–	7/26/18	0937	7/26/18	17:37	-30"	-11"	27501	03301								X		007,008
5	AA-4 West #1 (980 Hurricane)	6LC	–	7/26/18	0938	7/26/18	17:05	-29"	-25"	06030	11501								X		009,010
6	AA-5 West #2 (980 Hurricane)	6LC	–	7/26/18	0946	7/26/18	17:16	-30"	-3"	27001	27501								X		011,012
7	AA Duplicate (980 Hurricane)	6LC	–	7/26/18	09:40	7/26/18	16:31	-30"	-3"	08560	14501								X		013,014
8																					
9																					
10																					
11																					
12																					

Comments:
① Short list includes:
Vinyl Chloride
Trans 1,2 DCE
Cis 1,2 DCE
1,2 DCA
methylene chloride
1,1,1 TCA
TCE
PCE
② Run TCE via TO-15 SIM
③ Verify + record all pressures of canisters upon receipt at the lab.
ORIGINAL

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Brad Gentry/IWM	7/26/18	18:15	ERPeer	7/27/18	930

SAMPLE CONDITIONS

	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
✓		Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N
		Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brad Gentry / Chris Newell

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 07/26/18

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August 06, 2018

Brad Gentry
IWM Consulting Group, LLC.
7428 Rockville Road
Indianapolis, IN 46214

RE: Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Dear Brad Gentry:
Enclosed are the analytical results for sample(s) received by the laboratory on July 27, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on July 30, 2018 to add information to the Sample Qualifiers and Analyte Qualifiers sections. No data was modified.

This report was revised on August 6, 2018 to report vinyl chloride and 1,2-dichloroethane by TO15 SIM to attain lower reporting limits. The ending collection time for sample AA-1 North #1 (980 Hurricane)was also corrected per attached revised COC.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures

cc: Chris Newell, IWM Consulting Group

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(612)607-1700

CERTIFICATIONS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

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(612)607-1700

SAMPLE SUMMARY

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10441103001	AS Effluent #1 (980 Hurricane)	Air	07/26/18 17:25	07/27/18 09:30
10441103002	AS Effluent #1 Cert# 2064	Air	07/26/18 17:25	07/27/18 09:30
10441103003	AA-1 North #1 (980 Hurricane)	Air	07/26/18 17:39	07/27/18 09:30
10441103004	AA-1 North #1 Cert# 0944	Air	07/26/18 15:39	07/27/18 09:30
10441103005	AA-2 East #1 (980 Hurricane)	Air	07/26/18 16:31	07/27/18 09:30
10441103006	AA-2 East #1 Cert# 1265	Air	07/26/18 16:31	07/27/18 09:30
10441103007	AA-3 South #1 (980 Hurricane)	Air	07/26/18 17:37	07/27/18 09:30
10441103008	AA-3 South #1 Cert# 2750	Air	07/26/18 17:37	07/27/18 09:30
10441103009	AA-4 West #1 (980 Hurricane)	Air	07/26/18 17:05	07/27/18 09:30
10441103010	AA-4 West #1 Cert# 0603	Air	07/26/18 17:05	07/27/18 09:30
10441103011	AA-5 West #2 (980 Hurricane)	Air	07/26/18 17:16	07/27/18 09:30
10441103012	AA-5 West #2 Cert# 2700	Air	07/26/18 17:16	07/27/18 09:30
10441103013	AA Duplicate (980 Hurricane)	Air	07/26/18 16:31	07/27/18 09:30
10441103014	AA Duplicate Cert# 0856	Air	07/26/18 16:31	07/27/18 09:30
10441103015	Unused Can #2103	Air		07/27/18 09:30
10441103016	Unused Can #3288	Air		07/27/18 09:30

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(612)607-1700

SAMPLE ANALYTE COUNT

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10441103001	AS Effluent #1 (980 Hurricane)	TO-15	MJL	8	PASI-M
		TO-15	MJL	1	PASI-M
10441103002	AS Effluent #1 Cert# 2064	TO-15	NCK	9	PASI-M
10441103003	AA-1 North #1 (980 Hurricane)	TO-15	NCK	6	PASI-M
		TO-15	NCK	3	PASI-M
10441103004	AA-1 North #1 Cert# 0944	TO-15	NCK	9	PASI-M
10441103005	AA-2 East #1 (980 Hurricane)	TO-15	NCK	6	PASI-M
		TO-15	NCK	3	PASI-M
10441103006	AA-2 East #1 Cert# 1265	TO-15	AFV	9	PASI-M
10441103007	AA-3 South #1 (980 Hurricane)	TO-15	MJL	6	PASI-M
		TO-15	MJL	3	PASI-M
10441103008	AA-3 South #1 Cert# 2750	TO-15	AFV	9	PASI-M
10441103009	AA-4 West #1 (980 Hurricane)	TO-15	MJL	6	PASI-M
		TO-15	MJL	3	PASI-M
10441103010	AA-4 West #1 Cert# 0603	TO-15	MJL	9	PASI-M
10441103011	AA-5 West #2 (980 Hurricane)	TO-15	MJL	6	PASI-M
		TO-15	MJL	3	PASI-M
10441103012	AA-5 West #2 Cert# 2700	TO-15	CH1	9	PASI-M
10441103013	AA Duplicate (980 Hurricane)	TO-15	MJL	6	PASI-M
		TO-15	MJL	3	PASI-M
10441103014	AA Duplicate Cert# 0856	TO-15	AFV	9	PASI-M

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Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AS Effluent #1 (980 Hurricane) **Lab ID: 10441103001** Collected: 07/26/18 17:25 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	**39.2**	ug/m3	1.3	1.52		07/27/18 19:16	75-34-3	
1,2-Dichloroethane	**17.9**	ug/m3	0.62	1.52		07/27/18 19:16	107-06-2	
cis-1,2-Dichloroethene	**411**	ug/m3	36.8	45.6		07/29/18 15:37	156-59-2	
trans-1,2-Dichloroethene	**3.1**	ug/m3	1.2	1.52		07/27/18 19:16	156-60-5	
Methylene Chloride	ND	ug/m3	5.4	1.52		07/27/18 19:16	75-09-2	
Tetrachloroethene	**1950**	ug/m3	31.4	45.6		07/29/18 15:37	127-18-4	
1,1,1-Trichloroethane	**285**	ug/m3	50.6	45.6		07/29/18 15:37	71-55-6	
Vinyl chloride	**12.1**	ug/m3	0.40	1.52		07/27/18 19:16	75-01-4	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
Trichloroethene	**665**	ug/m3	2.5	45.6		07/29/18 15:37	79-01-6	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AS Effluent #1 Cert# 2064 **Lab ID: 10441103002** Collected: 07/26/18 17:25 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/16/18 14:39	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/16/18 14:39	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/16/18 14:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/16/18 14:39	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/16/18 14:39	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/16/18 14:39	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/16/18 14:39	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/16/18 14:39	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/16/18 14:39	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-1 North #1 (980 Hurricane) **Lab ID: 10441103003** Collected: 07/26/18 17:39 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 15:13	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:13	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 15:13	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 15:13	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 15:13	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 15:13	107-06-2	
Trichloroethene	ND	ug/m3	0.085	1.55		07/27/18 15:13	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 15:13	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-1 North #1 Cert# 0944 **Lab ID: 10441103004** Collected: 07/26/18 15:39 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		06/15/18 10:22	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		06/15/18 10:22	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/15/18 10:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/15/18 10:22	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		06/15/18 10:22	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		06/15/18 10:22	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		06/15/18 10:22	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		06/15/18 10:22	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		06/15/18 10:22	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-2 East #1 (980 Hurricane) **Lab ID: 10441103005** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 15:48	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 15:48	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 15:48	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 15:48	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 15:48	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 15:48	107-06-2	
Trichloroethene	**0.20**	ug/m3	0.085	1.55		07/27/18 15:48	79-01-6	1M
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 15:48	75-01-4	

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Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-2 East #1 Cert# 1265 **Lab ID: 10441103006** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/05/18 13:26	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/05/18 13:26	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/05/18 13:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/05/18 13:26	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/05/18 13:26	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/05/18 13:26	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/05/18 13:26	71-55-6	
Trichloroethene	**0.48J**	ug/m3	0.55	1		07/05/18 13:26	79-01-6	2M
Vinyl chloride	ND	ug/m3	0.26	1		07/05/18 13:26	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-3 South #1 (980 Hurricane) **Lab ID: 10441103007** Collected: 07/26/18 17:37 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.52		07/27/18 16:23	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.52		07/27/18 16:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.52		07/27/18 16:23	156-60-5	
Methylene Chloride	ND	ug/m3	5.4	1.52		07/27/18 16:23	75-09-2	
Tetrachloroethene	ND	ug/m3	1.0	1.52		07/27/18 16:23	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.52		07/27/18 16:23	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.062	1.52		07/27/18 16:23	107-06-2	
Trichloroethene	ND	ug/m3	0.083	1.52		07/27/18 16:23	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.52		07/27/18 16:23	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-3 South #1 Cert# 2750 **Lab ID: 10441103008** Collected: 07/26/18 17:37 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/18/18 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/18/18 14:59	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/18/18 14:59	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/18/18 14:59	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/18/18 14:59	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/18/18 14:59	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/18/18 14:59	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/18/18 14:59	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-4 West #1 (980 Hurricane) **Lab ID: 10441103009** Collected: 07/26/18 17:05 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.58		07/27/18 16:57	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 16:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 16:57	156-60-5	
Methylene Chloride	ND	ug/m3	5.6	1.58		07/27/18 16:57	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.58		07/27/18 16:57	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.8	1.58		07/27/18 16:57	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.065	1.58		07/27/18 16:57	107-06-2	
Trichloroethene	**0.087**	ug/m3	0.086	1.58		07/27/18 16:57	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		07/27/18 16:57	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-4 West #1 Cert# 0603 **Lab ID: 10441103010** Collected: 07/26/18 17:05 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		06/23/18 13:24	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		06/23/18 13:24	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/23/18 13:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		06/23/18 13:24	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		06/23/18 13:24	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		06/23/18 13:24	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		06/23/18 13:24	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		06/23/18 13:24	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		06/23/18 13:24	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-5 West #2 (980 Hurricane) **Lab ID: 10441103011** Collected: 07/26/18 17:16 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.58		07/27/18 18:07	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 18:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	1.58		07/27/18 18:07	156-60-5	
Methylene Chloride	ND	ug/m3	5.6	1.58		07/27/18 18:07	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.58		07/27/18 18:07	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.8	1.58		07/27/18 18:07	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.065	1.58		07/27/18 18:07	107-06-2	
Trichloroethene	**0.43**	ug/m3	0.086	1.58		07/27/18 18:07	79-01-6	
Vinyl chloride	ND	ug/m3	0.041	1.58		07/27/18 18:07	75-01-4	

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA-5 West #2 Cert# 2700 **Lab ID: 10441103012** Collected: 07/26/18 17:16 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	0.82	1		07/20/18 10:11	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	1		07/20/18 10:11	107-06-2	4M
cis-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/20/18 10:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	1		07/20/18 10:11	156-60-5	
Methylene Chloride	ND	ug/m3	3.5	1		07/20/18 10:11	75-09-2	
Tetrachloroethene	ND	ug/m3	0.69	1		07/20/18 10:11	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.1	1		07/20/18 10:11	71-55-6	
Trichloroethene	ND	ug/m3	0.55	1		07/20/18 10:11	79-01-6	5M
Vinyl chloride	ND	ug/m3	0.26	1		07/20/18 10:11	75-01-4	3M

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ANALYTICAL RESULTS

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

Sample: AA Duplicate (980 Hurricane) **Lab ID: 10441103013** Collected: 07/26/18 16:31 Received: 07/27/18 09:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
1,1-Dichloroethane	ND	ug/m3	1.3	1.55		07/27/18 18:41	75-34-3	
cis-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 18:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.2	1.55		07/27/18 18:41	156-60-5	
Methylene Chloride	ND	ug/m3	5.5	1.55		07/27/18 18:41	75-09-2	
Tetrachloroethene	ND	ug/m3	1.1	1.55		07/27/18 18:41	127-18-4	
1,1,1-Trichloroethane	ND	ug/m3	1.7	1.55		07/27/18 18:41	71-55-6	
TO15 MSV AIR SIM SCAN	Analytical Method: TO-15							
1,2-Dichloroethane	ND	ug/m3	0.064	1.55		07/27/18 18:41	107-06-2	
Trichloroethene	**0.16**	ug/m3	0.085	1.55		07/27/18 18:41	79-01-6	
Vinyl chloride	ND	ug/m3	0.040	1.55		07/27/18 18:41	75-01-4	

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QUALITY CONTROL DATA

Project: Former Amphenol Facility-Revised Report
Pace Project No.: 10441103

QC Batch: 553458 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

METHOD BLANK: 3007016 Matrix: Air
Associated Lab Samples: 10441103001, 10441103003, 10441103005, 10441103007, 10441103009, 10441103011, 10441103013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	07/27/18 11:24	
1,1-Dichloroethane	ug/m3	ND	0.82	07/27/18 11:24	
1,2-Dichloroethane	ug/m3	ND	0.41	07/27/18 11:24	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	07/27/18 11:24	
Methylene Chloride	ug/m3	ND	3.5	07/27/18 11:24	
Tetrachloroethene	ug/m3	ND	0.69	07/27/18 11:24	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	07/27/18 11:24	
Vinyl chloride	ug/m3	ND	0.26	07/27/18 11:24	

LABORATORY CONTROL SAMPLE: 3007017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	58.1	105	70-135	
1,1-Dichloroethane	ug/m3	41.1	41.2	100	70-134	
1,2-Dichloroethane	ug/m3	41.1	42.3	103	70-136	
cis-1,2-Dichloroethene	ug/m3	40.3	41.0	102	70-136	
Methylene Chloride	ug/m3	177	174	98	67-132	
Tetrachloroethene	ug/m3	68.9	74.5	108	70-133	
trans-1,2-Dichloroethene	ug/m3	40.3	45.2	112	70-132	
Vinyl chloride	ug/m3	26	25.7	99	70-141	

SAMPLE DUPLICATE: 3007019

Parameter	Units	10441103009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	.52J		25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS